
Cardiovascular Disease

PREVIOUSLY HAD HEART A ATTACK

Definition: Respondents who answered “yes” to the question “Has a doctor, nurse, or other health professional ever told you that you had a heart attack or myocardial infarction?”

Prevalence of previously had a heart attack

- South Dakota 4.6%
- There is no nationwide median for previously had a heart attack

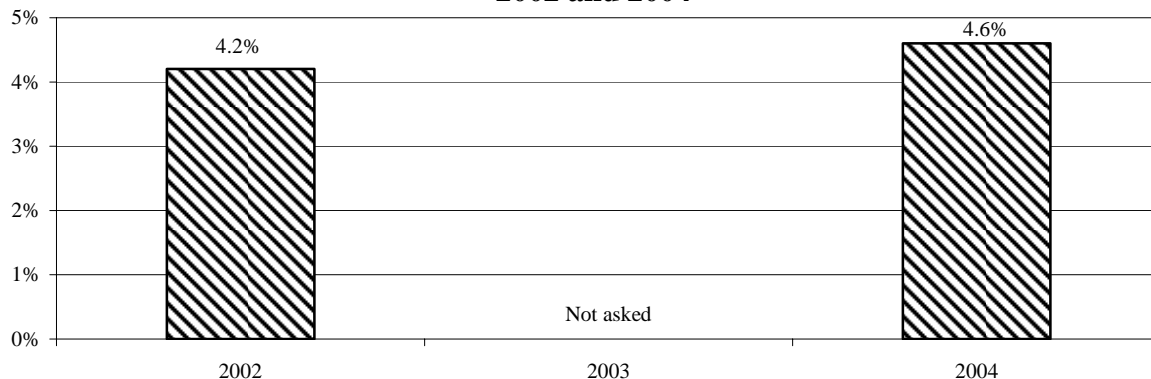
Healthy People 2010 Objective

There was no stated Healthy People 2010 Objective for previously had a heart attack.

Trend Analysis

This question has only been asked two years, 2002 and 2004. There was an increase in the percent of respondents who previously had a heart attack from 2002 to 2004.

Figure 52
Percent of Respondents Who Previously Had a Heart Attack,
2002 and 2004



Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2002 and 2004

Demographics

- Gender** A significantly higher percentage of males have been told they had a heart attack than females. This gender difference is evident in specific demographic categories such as those 65 and older, whites, those in the northeast, college graduates, and those who are married.
- Age** The prevalence of having a heart attack increases as age increases. Significant increases occur at the 55-64, 65-74, and 75 and older age groups, but males show their greatest increase as the 65-74 age group is reached, while females don't exhibit their largest increase until the 75 and older age group is attained.
- Race** There are no racial differences demonstrated by the available data.
- Region** There are no regional differences observed from the available data.

Household Income	The prevalence of having a heart attack decreases for males as their household income increases. This includes a significant decrease as the \$25,000-\$34,999 income group is reached. While females do show a much lower prevalence in the larger income groups, the defined decreases are not as evident with them as they are for males.
Education	Heart attack prevalence decreases as education increases. This includes a significant decrease as the some high school education level is obtained.
Employment Status	Those who are unable to work or retired demonstrate a very high prevalence of having a heart attack, while those who are employed for wages, unemployed, a homemaker, or a student show a very low prevalence.
Marital Status	Those who are widowed exhibit a very high prevalence of having a heart attack, while those who have never been married show a very low prevalence.

Table 78
Respondents Who Previously Had a Heart Attack, 2004

	Total			Male			Female		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
Total	5,994	4.6	(4.1-5.2)	2,452	5.7	(4.9-6.7)	3,542	3.5	(3.0-4.2)
Age									
18-24	325	0.0	-	140	0.0	-	185	0.0	-
25-34	764	0.3	(0.1-1.1)	327	0.6	(0.2-2.1)	437	0.0	-
35-44	1,004	1.3	(0.7-2.2)	415	1.7	(0.8-3.6)	589	0.8	(0.4-1.8)
45-54	1,253	2.6	(1.8-3.8)	552	3.2	(2.0-5.2)	701	2.0	(1.0-3.8)
55-64	950	6.2	(4.7-8.2)	400	6.9	(4.7-10.1)	550	5.5	(3.6-8.2)
65-74	873	12.4	(10.1-15.1)	363	18.6	(14.5-23.5)	510	7.0	(5.0-9.8)
75+	805	18.7	(15.8-22.0)	249	26.9	(21.3-33.4)	556	13.7	(10.7-17.2)
Race									
White	5,370	4.5	(4.0-5.1)	2,213	5.7	(4.9-6.7)	3,157	3.3	(2.8-4.0)
American Indian	419	6.0	(4.0-9.1)	158	6.3	(3.3-11.9)	261	5.8	(3.4-9.8)
Region									
Southeast	1,483	4.0	(3.1-5.0)	611	4.6	(3.3-6.3)	872	3.4	(2.4-4.7)
Northeast	1,359	5.2	(4.2-6.5)	546	7.0	(5.2-9.3)	813	3.6	(2.6-4.9)
Central	1,128	5.0	(3.9-6.5)	450	6.3	(4.5-8.7)	678	4.0	(2.7-5.9)
West	1,397	4.6	(3.7-5.8)	581	5.8	(4.3-7.8)	816	3.5	(2.4-4.9)
American Indian Counties	627	5.1	(3.7-7.0)	264	6.4	(4.1-9.8)	363	3.9	(2.4-6.1)
Household Income									
Less than \$10,000	295	6.7	(4.5-9.8)	*	*	*	*	*	*
\$10,000-\$14,999	362	11.6	(8.4-15.8)	*	*	*	*	*	*
\$15,000-\$19,999	492	9.5	(7.1-12.5)	181	12.4	(8.4-18.0)	311	7.1	(4.6-10.7)
\$20,000-\$24,999	665	8.3	(6.3-10.9)	255	10.7	(7.4-15.2)	410	6.1	(3.9-9.2)
\$25,000-\$34,999	964	3.8	(2.7-5.3)	427	4.7	(3.1-7.1)	537	2.9	(1.6-5.1)
\$35,000-\$49,999	1,031	2.8	(1.9-4.1)	465	3.8	(2.4-6.0)	566	1.7	(0.8-3.4)
\$50,000-\$74,999	894	2.1	(1.3-3.3)	401	3.8	(2.3-6.2)	493	0.4	(0.1-1.4)
\$75,000+	711	2.6	(1.7-4.1)	375	3.7	(2.3-6.1)	336	1.0	(0.3-2.7)
Education									
8th Grade or Less	250	18.7	(13.8-24.9)	128	19.0	(12.7-27.5)	122	18.3	(11.3-28.1)
Some High School	312	7.4	(5.0-10.9)	128	9.1	(5.2-15.3)	184	5.8	(3.4-9.7)
High School or G.E.D.	1,967	5.2	(4.3-6.2)	839	5.6	(4.3-7.2)	1,128	4.7	(3.6-6.2)
Some Post-High School	1,704	3.7	(2.9-4.7)	630	4.8	(3.4-6.6)	1,074	2.8	(2.0-4.0)
College Graduate	1,753	2.9	(2.2-3.9)	724	4.5	(3.2-6.3)	1,029	1.4	(0.9-2.3)

Table 78 (continued)
Respondents Who Previously Had a Heart Attack, 2004

	Total			Male			Female		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
Employment Status									
Employed for Wages	2,984	1.8	(1.4-2.4)	1,221	2.2	(1.6-3.1)	1,763	1.5	(1.0-2.2)
Self-employed	810	3.0	(2.1-4.4)	530	4.2	(2.9-6.2)	280	0.4	(0.1-1.4)
Unemployed	141	2.7	(0.9-7.7)	*	*	*	*	*	*
Homemaker	280	1.7	(0.7-3.8)	*	*	*	*	*	*
Student	130	0.4	(0.1-1.7)	*	*	*	*	*	*
Retired	1,467	15.3	(13.3-17.6)	513	21.2	(17.5-25.4)	954	11.0	(8.9-13.5)
Unable to Work	180	16.3	(11.0-23.6)	*	*	*	*	*	*
Marital Status									
Married/Unmarried Couple	3,582	4.1	(3.5-4.8)	1,542	5.6	(4.6-6.9)	2,040	2.6	(1.9-3.4)
Divorced/Separated	799	5.8	(4.2-7.8)	346	8.4	(5.7-12.1)	453	3.5	(2.0-5.8)
Widowed	872	15.7	(13.1-18.7)	161	30.4	(23.1-38.8)	711	12.2	(9.7-15.2)
Never Married	729	1.0	(0.6-1.7)	400	1.2	(0.7-2.3)	329	0.6	(0.2-1.6)

Note: *Results based on sample sizes less than 100 have been suppressed.

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2004

Further Analysis

Following are data illustrating the percent of those who previously had a heart attack for various health behaviors and conditions. For example, 15.8 percent of respondents who stated they have fair or poor health stated they previously had a heart attack, while 3.0 percent of respondents who stated they have excellent, very good, or good health status stated they had a heart attack.

Table 79
Previously Had a Heart Attack for Selected Health Behaviors and Conditions, 2004

Health Behavior or Condition	# Respondents	% Had Heart Attack	95% CI
Fair or Poor Health Status	933	15.8	13.4-18.6
Excellent, Very Good, or Good Health Status	5,048	3.0	2.6-3.5
Physical Health Not Good for 30 Days of the Past 30	382	18.2	14.4-22.9
Physical Health Not Good for 0-29 Days of the Past 30	5,560	3.7	3.2-4.3
Mental Health Not Good for 20-30 Days of the Past 30	338	6.8	4.6-9.9
Mental Health Not Good for 0-19 Days of the Past 30	5,598	4.4	3.9-5.0
Usual Activities Unattainable for 10-30 Days of the Past 30	387	12.5	9.5-16.4
Usual Activities Unattainable for 0-9 Days of the Past 30	5,588	4.0	3.5-4.6
Obese (BMI = 30.0+)	1,519	5.7	4.6-7.0
Overweight (BMI = 25.0-29.9)	2,221	4.9	4.0-5.9
Recommended Weight (BMI = 18.5-24.9)	1,995	3.7	2.9-4.6
No Leisure Time Physical Activity	1,285	8.3	6.8-10.1
Leisure Time Physical Activity	4,706	3.7	3.2-4.3
Current Smoker	1,202	3.8	2.9-5.0
Former Smoker	1,569	9.0	7.6-10.6
Never Smoked	3,214	3.0	2.5-3.6
Drank Alcohol in Past 30 Days	3,218	3.2	2.7-3.9
No Alcohol in Past 30 Days	2,740	6.5	5.6-7.5
Binge Drinker	776	1.7	1.0-2.7
Not a Binge Drinker	5,165	5.1	4.6-5.8
Heavy Drinker	203	2.9	1.4-5.8
Not a Heavy Drinker	5,718	4.7	4.1-5.2
No Mammogram within Past Two Years (40+)	643	7.3	5.3-10.0
Mammogram within Past Two Years (40+)	1,982	5.0	4.0-6.1

Table 79 (continued)
Previously Had a Heart Attack for Selected Health Behaviors and Conditions, 2004

Health Behavior or Condition	# Respondents	% Had Heart Attack	95% CI
No Clinical Breast Exam within Past Two Years	666	6.8	5.0-9.3
Clinical Breast Exam within Past Two Years	2,846	2.7	2.1-3.3
Insufficient Cervical Cancer Screening	396	7.8	5.3-11.5
Sufficient Cervical Cancer Screening	2,206	1.9	1.4-2.5
No PSA Test within Past Two Years (40+)	783	5.3	3.9-7.1
PSA Test within Past Two Years (40+)	953	13.1	10.9-15.5
No Digital Rectal Exam within Past Two Years (40+)	796	6.2	4.7-8.1
Digital Rectal Exam within Past Two Years (40+)	996	11.6	9.6-13.9
No Blood Stool Test within Past Two Years (50+)	2,383	9.7	8.4-11.1
Blood Stool Test within Past Two Years (50+)	877	11.5	9.3-14.1
Never Had Sigmoidoscopy or Colonoscopy (50+)	1,627	7.7	6.4-9.3
Ever Had Sigmoidoscopy or Colonoscopy (50+)	1,659	12.5	10.8-14.5
Haven't Been to the Dentist in the Past 12 Months	1,811	6.9	5.8-8.2
Been to the Dentist in the Past 12 Months	4,172	3.7	3.2-4.3
Not Taking any Precautions Against West Nile Virus	1,907	6.4	5.3-7.6
Taking Precautions Against West Nile Virus	4,057	3.8	3.2-4.4
No Health Insurance (18-64)	366	1.8	0.9-3.7
Health Insurance (18-64)	3,897	1.9	1.5-2.4
Employer Based Health Insurance Coverage (18-64)	2,673	1.5	1.1-2.0
Private Health Insurance Plan (18-64)	530	1.2	0.5-2.7
Medicare (18-64)	116	8.6	4.4-16.2
Medicaid or Medical Assistance (18-64)	110	6.2	3.1-12.2
The Military, CHAMPUS, TriCare, or the VA (18-64)	185	4.8	2.5-8.9
The Indian Health Service (18-64)	234	2.2	1.0-4.9
No Flu Shot (65+)	410	10.5	7.7-14.1
Flu Shot (65+)	1,263	17.3	15.0-19.8
No Pneumonia Shot (65+)	569	10.8	8.2-13.9
Pneumonia Shot (65+)	1,089	18.1	15.6-20.9
Diabetes	518	16.6	13.2-20.6
No Diabetes	5,473	3.8	3.3-4.3
Current Asthma	439	8.9	6.5-12.1
Former Asthma	185	2.7	1.1-6.6
Never Had Asthma	5,347	4.4	3.8-4.9
Have Angina or Coronary Heart Disease	400	40.5	35.2-46.1
Do not Have Angina or Coronary Heart Disease	5,570	2.5	2.1-2.9
Previously Had a Stroke	192	33.3	26.2-41.3
Never Had a Stroke	5,794	3.9	3.4-4.4
Physical, Mental, or Emotional Disability	1,240	12.2	10.3-14.4
No Physical, Mental, or Emotional Disability	4,745	3.0	2.6-3.5
Disability with Special Equipment Needed	444	21.5	17.2-26.4
No Disability with Special Equipment Needed	5,548	3.6	3.2-4.1
Four or More Hours of TV Watched per Day	1,421	8.7	7.2-10.3
Less Than Four Hours of TV Watched per Day	4,518	3.5	3.0-4.1
Sick from Poor Indoor Air Quality in Past Year	996	2.9	2.0-4.0
Not Sick from Poor Indoor Air Quality in Past Year	4,953	5.0	4.4-5.6
Sick from Outdoor Air Pollution in Past Year	419	7.8	5.6-10.9
Not Sick from Outdoor Air Pollution in Past Year	5,551	4.4	3.9-5.0
Firearm in Household	3,364	4.5	3.8-5.2
No Firearms in Household	2,516	4.7	3.9-5.6

Table 79 (continued) Previously Had a Heart Attack for Selected Health Behaviors and Conditions, 2004			
Health Behavior or Condition	# Respondents	% Had Heart Attack	95% CI
Loaded and Unlocked Firearm in Household	273	5.0	3.1-8.0
No Loaded and Unlocked Firearms in Household	5,569	4.5	4.0-5.1
No Birth Control (females 18-44 & males 18-59)	327	2.5	1.2-5.0
Birth Control (females 18-44 & males 18-59)	1,662	0.9	0.6-1.4
Never Been Tested for HIV (18-64)	3,071	1.8	1.4-2.3
Been Tested for HIV (18-64)	1,142	2.4	1.7-3.5
Sunburn in Past 12 Months	2,127	1.9	1.4-2.5
No Sunburn in Past 12 Months	3,858	6.6	5.9-7.5
Military Veteran	993	10.6	8.7-12.7
Not a Military Veteran	5,000	3.4	3.0-3.9

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2004

ANGINA OR CORONARY HEART DISEASE

Definition: Respondents who answered “yes” to the question “Has a doctor, nurse, or other health professional ever told you that you have angina or coronary heart disease?”

Prevalence of angina or coronary heart disease

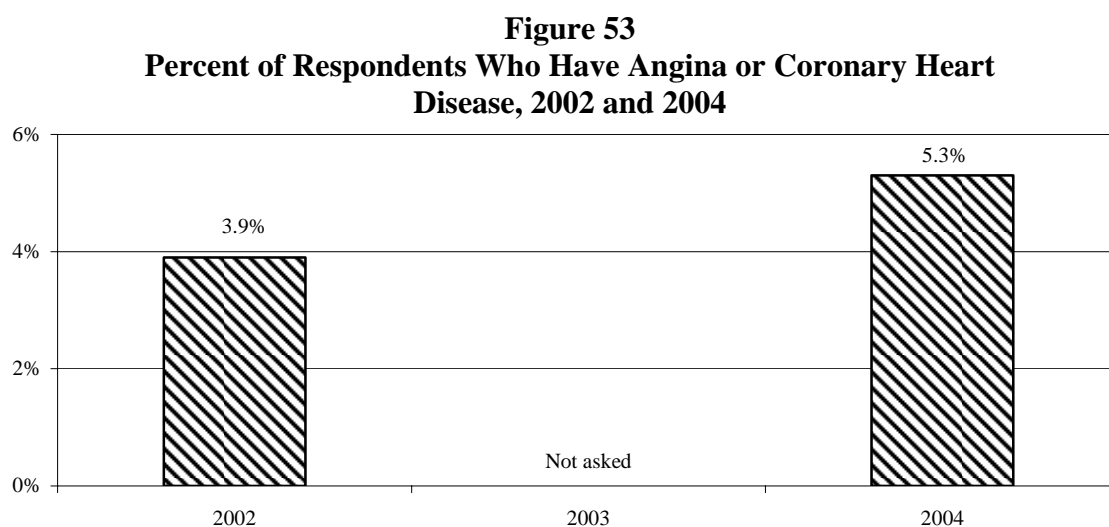
- South Dakota 5.3%
- There is no nationwide median for having angina or coronary heart disease

Healthy People 2010 Objective

There was no stated Healthy People 2010 Objective for having angina or coronary heart disease.

Trend Analysis

This question has only been asked two years, 2002 and 2004. There was an increase in the percent of respondents who stated they have been told they have angina or coronary heart disease from 2002 to 2004.



Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2002 and 2004

Demographics

- Gender** A significantly higher percentage of males have been told they have angina or coronary heart disease than females. This gender difference is evident in specific demographic categories such as those 75 and older, whites, and those who are married.
- Age** The prevalence of having been told they have heart disease increases as age increases with significant increases occurring at the 55-64 and 65-74 age groups.
- Race** There are no racial differences demonstrated by the available data.
- Region** There are no regional differences observed from the available data.

Household Income	The prevalence of having been told they have heart disease does not follow a pattern as household income increases.
Education	Heart disease prevalence decreases as education increases. This includes a significant decrease as the some high school education level is obtained.
Employment Status	Those who are unable to work or retired demonstrate a very high prevalence of having been told they have heart disease, while those who are employed for wages or a student show a very low prevalence.
Marital Status	Those who are widowed exhibit a very high prevalence of having been told they have heart disease, while those who have never been married show a very low prevalence.

Table 80
Respondents Who Have Angina or Coronary Heart Disease, 2004

	Total			Male			Female		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
Total	5,975	5.3	(4.8-6.0)	2,444	6.3	(5.4-7.4)	3,531	4.4	(3.7-5.1)
Age									
18-24	325	0.0	-	140	0.0	-	185	0.0	-
25-34	763	0.5	(0.2-1.7)	326	0.5	(0.1-3.2)	437	0.6	(0.1-2.4)
35-44	1,002	2.0	(1.2-3.4)	415	3.0	(1.5-5.7)	587	1.1	(0.5-2.4)
45-54	1,249	3.4	(2.4-4.9)	549	4.7	(3.0-7.3)	700	2.1	(1.2-3.7)
55-64	945	7.0	(5.3-9.1)	398	8.5	(5.9-12.1)	547	5.5	(3.7-8.3)
65-74	871	15.1	(12.6-18.1)	361	19.2	(14.9-24.3)	510	11.7	(8.9-15.1)
75+	800	19.4	(16.4-22.8)	249	25.4	(19.8-32.0)	551	15.6	(12.4-19.4)
Race									
White	5,353	5.3	(4.7-6.0)	2,207	6.4	(5.4-7.5)	3,146	4.3	(3.6-5.0)
American Indian	417	6.8	(4.2-10.9)	156	8.4	(3.9-17.1)	261	5.6	(3.2-9.6)
Region									
Southeast	1,476	4.9	(4.0-6.2)	608	6.0	(4.4-8.1)	868	4.0	(2.9-5.4)
Northeast	1,358	5.9	(4.7-7.3)	548	7.5	(5.6-10.0)	810	4.4	(3.2-5.9)
Central	1,122	5.5	(4.3-7.0)	445	5.4	(3.7-7.8)	677	5.6	(4.0-7.8)
West	1,395	5.5	(4.4-6.7)	581	6.4	(4.8-8.6)	814	4.5	(3.3-6.1)
American Indian Counties	624	4.7	(3.3-6.5)	262	5.5	(3.4-8.6)	362	3.9	(2.3-6.3)
Household Income									
Less than \$10,000	294	7.2	(4.5-11.2)	*	*	*	*	*	*
\$10,000-\$14,999	362	13.4	(9.8-18.1)	100	15.6	(8.8-26.0)	262	12.3	(8.4-17.4)
\$15,000-\$19,999	487	8.6	(6.2-11.8)	179	10.2	(6.3-16.1)	308	7.3	(4.7-11.2)
\$20,000-\$24,999	663	8.9	(6.8-11.7)	255	11.3	(7.7-16.4)	408	6.7	(4.7-9.6)
\$25,000-\$34,999	965	5.3	(3.9-7.1)	427	6.6	(4.5-9.5)	538	3.8	(2.4-6.1)
\$35,000-\$49,999	1,026	3.9	(2.9-5.3)	460	5.0	(3.4-7.3)	566	2.8	(1.6-4.7)
\$50,000-\$74,999	891	2.2	(1.3-3.5)	400	3.2	(1.8-5.6)	491	1.2	(0.5-3.0)
\$75,000+	710	3.2	(2.1-4.8)	374	4.0	(2.5-6.4)	336	1.9	(0.8-4.4)
Education									
8th Grade or Less	248	17.9	(13.0-24.1)	128	15.9	(9.9-24.5)	120	20.9	(13.6-30.7)
Some High School	309	6.1	(3.8-9.7)	126	8.9	(4.9-15.5)	183	3.3	(1.6-6.4)
High School or G.E.D.	1,959	5.9	(4.9-7.1)	836	6.4	(4.9-8.3)	1,123	5.4	(4.1-7.0)
Some Post-High School	1,704	5.1	(4.1-6.3)	630	6.4	(4.7-8.7)	1,074	4.0	(3.0-5.4)
College Graduate	1,748	3.5	(2.7-4.6)	721	4.5	(3.2-6.4)	1,027	2.6	(1.7-3.8)

Table 80 (continued)
Respondents Who Have Angina or Coronary Heart Disease, 2004

	Total			Male			Female		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
Employment Status									
Employed for Wages	2,976	2.3	(1.7-2.9)	1,216	3.0	(2.1-4.1)	1,760	1.5	(1.0-2.3)
Self-employed	808	3.6	(2.5-5.1)	528	4.5	(3.0-6.7)	280	1.5	(0.6-3.3)
Unemployed	140	0.0	-	*	*	*	*	*	*
Homemaker	279	4.3	(2.3-8.0)	*	*	*	*	*	*
Student	130	0.3	(0.0-1.8)	*	*	*	*	*	*
Retired	1,462	17.4	(15.2-19.8)	514	22.6	(18.8-27.1)	948	13.5	(11.3-16.2)
Unable to Work	178	18.2	(12.4-25.8)	*	*	*	*	*	*
Marital Status									
Married/Unmarried Couple	3,573	5.3	(4.5-6.1)	1,537	7.2	(6.0-8.7)	2,036	3.3	(2.6-4.2)
Divorced/Separated	796	4.9	(3.4-6.9)	345	5.7	(3.4-9.5)	451	4.2	(2.6-6.6)
Widowed	865	16.4	(13.8-19.4)	159	24.6	(18.0-32.7)	706	14.4	(11.7-17.7)
Never Married	729	0.9	(0.5-1.8)	400	1.0	(0.4-2.4)	329	0.8	(0.3-2.0)

Note: *Results based on sample sizes less than 100 have been suppressed.

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2004

Further Analysis

Following are data illustrating the percent of those who have angina or coronary heart disease for various health behaviors and conditions. For example, 10 percent of respondents who stated they were a former smoker have angina or coronary heart disease, while 3.7 percent of respondents who stated they never smoked have angina or coronary heart disease.

Table 81
Have Angina or Coronary Heart Disease for Selected Health Behaviors and Conditions, 2004

Health Behavior or Condition	# Respondents	% Heart Disease	95% CI
Fair or Poor Health Status	924	18.8	16.1-21.9
Excellent, Very Good, or Good Health Status	5,038	3.4	3.0-4.0
Physical Health Not Good for 30 Days of the Past 30	374	18.7	14.6-23.6
Physical Health Not Good for 0-29 Days of the Past 30	5,549	4.5	4.0-5.1
Mental Health Not Good for 20-30 Days of the Past 30	335	8.0	5.2-12.2
Mental Health Not Good for 0-19 Days of the Past 30	5,582	5.2	4.6-5.8
Usual Activities Unattainable for 10-30 Days of the Past 30	379	14.6	11.1-19.1
Usual Activities Unattainable for 0-9 Days of the Past 30	5,578	4.7	4.2-5.3
Obese (BMI = 30.0+)	1,508	7.5	6.1-9.1
Overweight (BMI = 25.0-29.9)	2,215	5.4	4.6-6.5
Recommended Weight (BMI = 18.5-24.9)	1,994	4.1	3.3-5.1
No Leisure Time Physical Activity	1,274	8.2	6.6-10.0
Leisure Time Physical Activity	4,698	4.7	4.1-5.4
Current Smoker	1,198	4.5	3.4-5.9
Former Smoker	1,562	10.0	8.4-11.8
Never Smoked	3,206	3.7	3.1-4.4
Drank Alcohol in Past 30 Days	3,213	3.8	3.2-4.5
No Alcohol in Past 30 Days	2,727	7.5	6.5-8.7
Binge Drinker	776	1.8	1.0-3.0
Not a Binge Drinker	5,147	6.1	5.4-6.8
Heavy Drinker	203	3.4	1.6-7.4
Not a Heavy Drinker	5,700	5.4	4.8-6.1
No Mammogram within Past Two Years (40+)	637	6.6	4.8-9.0
Mammogram within Past Two Years (40+)	1,977	6.8	5.7-8.2

Table 81 (continued)
Have Angina or Coronary Heart Disease for Selected Health Behaviors and Conditions,
2004

Health Behavior or Condition	# Respondents	% Heart Disease	95% CI
No Clinical Breast Exam within Past Two Years	665	7.1	5.2-9.5
Clinical Breast Exam within Past Two Years	2,838	3.8	3.2-4.6
Insufficient Cervical Cancer Screening	391	6.7	4.5-9.7
Sufficient Cervical Cancer Screening	2,200	2.2	1.7-3.0
No PSA Test within Past Two Years (40+)	781	5.3	3.8-7.3
PSA Test within Past Two Years (40+)	951	14.1	11.8-16.8
No Digital Rectal Exam within Past Two Years (40+)	794	5.4	4.0-7.3
Digital Rectal Exam within Past Two Years (40+)	992	13.6	11.4-16.2
No Blood Stool Test within Past Two Years (50+)	2,372	10.3	9.0-11.7
Blood Stool Test within Past Two Years (50+)	873	14.1	11.6-17.1
Never Had Sigmoidoscopy or Colonoscopy (50+)	1,620	7.5	6.1-9.1
Ever Had Sigmoidoscopy or Colonoscopy (50+)	1,652	14.8	12.9-16.9
Haven't Been to the Dentist in the Past 12 Months	1,801	7.1	5.9-8.4
Been to the Dentist in the Past 12 Months	4,163	4.7	4.0-5.4
Not Taking any Precautions Against West Nile Virus	1,900	6.7	5.6-8.0
Taking Precautions Against West Nile Virus	4,047	4.7	4.1-5.5
No Health Insurance (18-64)	366	1.5	0.7-3.5
Health Insurance (18-64)	3,885	2.6	2.1-3.2
Employer Based Health Insurance Coverage (18-64)	2,664	2.2	1.6-2.9
Private Health Insurance Plan (18-64)	529	1.6	0.8-3.4
Medicare (18-64)	115	10.1	5.4-18.0
Medicaid or Medical Assistance (18-64)	109	4.5	1.8-10.5
The Military, CHAMPUS, TriCare, or the VA (18-64)	185	7.4	4.1-13.0
The Indian Health Service (18-64)	234	1.9	0.8-4.3
No Flu Shot (65+)	407	12.3	9.0-16.7
Flu Shot (65+)	1,259	18.9	16.5-21.5
No Pneumonia Shot (65+)	564	10.0	7.3-13.5
Pneumonia Shot (65+)	1,086	20.8	18.1-23.7
Diabetes	517	20.6	16.7-25.2
No Diabetes	5,455	4.3	3.8-4.9
Current Asthma	433	12.3	9.3-16.0
Former Asthma	185	6.0	3.3-10.8
Never Had Asthma	5,334	4.8	4.2-5.4
Previously Had a Heart Attack	362	47.8	42.0-53.7
Never Had a Heart Attack	5,608	3.3	2.8-3.9
Previously Had a Stroke	189	26.5	20.0-34.2
Never Had a Stroke	5,781	4.9	4.3-5.5
Physical, Mental, or Emotional Disability	1,227	15.5	13.3-18.0
No Physical, Mental, or Emotional Disability	4,739	3.3	2.8-3.8
Disability with Special Equipment Needed	436	22.8	18.4-27.8
No Disability with Special Equipment Needed	5,537	4.4	3.8-5.0
Four or More Hours of TV Watched per Day	1,412	10.6	8.9-12.5
Less Than Four Hours of TV Watched per Day	4,510	4.0	3.4-4.6
Sick from Poor Indoor Air Quality in Past Year	993	6.0	4.6-7.8
Not Sick from Poor Indoor Air Quality in Past Year	4,938	5.2	4.6-5.9
Sick from Outdoor Air Pollution in Past Year	416	9.1	6.6-12.6
Not Sick from Outdoor Air Pollution in Past Year	5,536	5.1	4.5-5.7
Firearm in Household	3,352	4.7	4.0-5.5
No Firearms in Household	2,510	6.2	5.2-7.3

Table 81 (continued)
Have Angina or Coronary Heart Disease for Selected Health Behaviors and Conditions,
2004

Health Behavior or Condition	# Respondents	% Heart Disease	95% CI
Loaded and Unlocked Firearm in Household	274	5.4	3.0-9.4
No Loaded and Unlocked Firearms in Household	5,550	5.3	4.7-5.9
No Birth Control (females 18-44 & males 18-59)	325	2.3	1.0-5.1
Birth Control (females 18-44 & males 18-59)	1,659	2.0	1.4-2.9
Never Been Tested for HIV (18-64)	3,064	2.3	1.8-2.9
Been Tested for HIV (18-64)	1,137	3.0	2.1-4.3
Sunburn in Past 12 Months	2,122	2.4	1.8-3.2
No Sunburn in Past 12 Months	3,843	7.6	6.7-8.6
Military Veteran	989	12.4	10.3-14.9
Not a Military Veteran	4,985	3.9	3.4-4.5

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2004

PREVIOUSLY HAD A STROKE

Definition: Respondents who answered “yes” to the question “Has a doctor, nurse, or other health professional ever told you that you have previously had a stroke?”

Prevalence of previously had a stroke

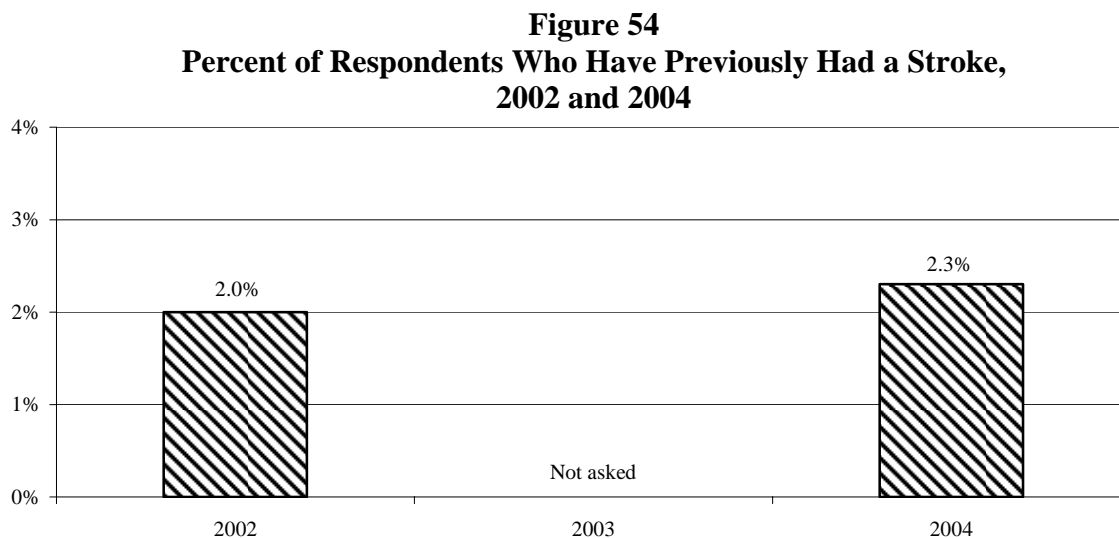
- South Dakota 2.3%
- There is no nationwide median for previously had a stroke

Healthy People 2010 Objective

There was no stated Healthy People 2010 Objective for previously had a stroke.

Trend Analysis

This question has only been asked two years, 2002 and 2004. There was an increase in the percent of respondents who stated they have previously had a stroke from 2002 to 2004.



Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2002 and 2004

Demographics

Gender	There is no gender difference exhibited by the available data for having had a stroke.
Age	The prevalence of having had a stroke increases as age increases. This includes significant increases occurring when the 45-54 and 65-74 age groups are reached.
Race	There are no racial differences demonstrated by the available data.
Region	There are no regional differences observed from the available data.
Household Income	The prevalence of having had a stroke decreases for males as household income increases. Females in the higher income groups do generally have a lower prevalence than those in the lower income groups, but the steady decline over all income groups is not as evident for females as it is for males.

Education	Stroke prevalence decreases as education increases. However, this is much more evident in females than males.
Employment Status	Those who are unable to work, retired, or unemployed demonstrate a very high prevalence of having had a stroke, while those who are employed for wages, self-employed, or a homemaker show a very low prevalence.
Marital Status	Those who are widowed exhibit a very high prevalence of having had a stroke, while those who have never been married show a very low prevalence.

Table 82									
Respondents Who Previously Had a Stroke, 2004									
	Total			Male			Female		
	# Resp.	%	95% CI	# Resp.	%	95% CI	# Resp.	%	95% CI
Total	5,991	2.3	(2.0-2.7)	2,453	2.1	(1.6-2.7)	3,538	2.5	(2.0-3.1)
Age									
18-24	325	0.0	-	140	0.0	-	185	0.0	-
25-34	762	0.1	(0.0-0.5)	326	0.1	(0.0-1.0)	436	0.1	(0.0-0.4)
35-44	1,003	0.4	(0.2-0.9)	415	0.2	(0.0-1.2)	588	0.7	(0.3-1.6)
45-54	1,252	1.6	(1.0-2.6)	552	1.4	(0.7-2.9)	700	1.9	(1.0-3.3)
55-64	951	3.1	(2.1-4.6)	401	3.5	(2.0-6.1)	550	2.7	(1.6-4.6)
65-74	871	6.4	(4.7-8.5)	361	6.6	(4.2-10.1)	510	6.2	(4.2-9.2)
75+	807	9.2	(7.1-11.8)	252	9.6	(6.3-14.6)	555	8.9	(6.5-12.1)
Race									
White	5,369	2.2	(1.8-2.6)	2,215	2.0	(1.5-2.6)	3,154	2.4	(1.9-3.0)
American Indian	418	3.9	(2.3-6.7)	158	5.2	(2.4-10.7)	260	3.0	(1.4-6.3)
Region									
Southeast	1,482	2.1	(1.5-2.9)	610	2.0	(1.2-3.3)	872	2.2	(1.5-3.4)
Northeast	1,361	2.2	(1.6-3.1)	548	2.3	(1.4-3.8)	813	2.2	(1.4-3.3)
Central	1,127	2.7	(1.9-3.8)	450	2.4	(1.4-4.2)	677	3.0	(1.9-4.6)
West	1,396	2.5	(1.8-3.3)	582	2.0	(1.2-3.2)	814	3.0	(2.1-4.3)
American Indian Counties	625	2.3	(1.3-3.9)	263	2.2	(0.9-5.2)	362	2.4	(1.2-4.6)
Household Income									
Less than \$10,000	296	5.5	(3.4-8.6)	*	*	*	*	*	*
\$10,000-\$14,999	363	7.1	(4.7-10.5)	100	7.7	(3.6-15.6)	263	6.7	(4.2-10.6)
\$15,000-\$19,999	490	4.3	(2.8-6.5)	180	3.0	(1.4-6.6)	310	5.3	(3.1-8.7)
\$20,000-\$24,999	666	3.9	(2.7-5.7)	256	2.8	(1.5-5.3)	410	5.0	(3.2-7.7)
\$25,000-\$34,999	963	1.9	(1.2-3.1)	427	2.4	(1.2-4.6)	536	1.4	(0.7-2.7)
\$35,000-\$49,999	1,031	0.9	(0.4-1.8)	465	1.5	(0.7-3.3)	566	0.2	(0.0-0.7)
\$50,000-\$74,999	892	1.0	(0.6-1.8)	400	1.5	(0.8-3.0)	492	0.5	(0.2-1.5)
\$75,000+	711	0.6	(0.3-1.4)	375	0.8	(0.3-2.1)	336	0.4	(0.1-1.7)
Education									
8th Grade or Less	251	7.3	(4.5-11.7)	129	4.3	(1.7-10.3)	122	11.9	(6.8-20.0)
Some High School	311	4.3	(2.6-7.2)	127	4.5	(2.0-9.9)	184	4.1	(2.2-7.6)
High School or G.E.D.	1,966	2.9	(2.2-3.7)	840	2.0	(1.3-3.1)	1,126	3.8	(2.8-5.2)
Some Post-High School	1,706	1.7	(1.2-2.4)	632	1.5	(0.9-2.6)	1,074	1.9	(1.2-2.8)
College Graduate	1,749	1.4	(0.9-2.1)	722	2.2	(1.3-3.5)	1,027	0.7	(0.4-1.3)
Employment Status									
Employed for Wages	2,980	0.7	(0.5-1.1)	1,219	0.6	(0.3-1.2)	1,761	0.8	(0.5-1.4)
Self-employed	809	0.8	(0.4-1.7)	529	1.2	(0.6-2.4)	280	0.0	
Unemployed	141	3.1	(1.3-7.2)	*	*	*	*	*	*
Homemaker	279	2.7	(1.1-6.2)	*	*	*	*	*	*
Student	130	0.0	-	*	*	*	*	*	*
Retired	1,470	7.9	(6.5-9.7)	517	8.7	(6.3-11.9)	953	7.4	(5.7-9.5)
Unable to Work	180	9.5	(6.0-14.5)	*	*	*	*	*	*
Marital Status									
Married/Unmarried Couple	3,580	2.0	(1.6-2.5)	1,542	2.2	(1.6-3.1)	2,038	1.7	(1.2-2.4)
Divorced/Separated	800	3.0	(2.0-4.6)	347	3.0	(1.6-5.6)	453	3.0	(1.7-5.2)
Widowed	871	8.5	(6.7-10.9)	161	7.6	(4.1-13.5)	710	8.8	(6.7-11.4)
Never Married	728	0.4	(0.2-1.0)	400	0.6	(0.2-1.5)	328	0.2	(0.0-0.8)

Note: *Results based on sample sizes less than 100 have been suppressed.

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2004

Further Analysis

Following are data illustrating the percent of those who previously had a stroke for various health behaviors and conditions. For example, 6.7 percent of respondents who stated they have diabetes previously had a stroke, while 2.0 percent of respondents who stated they do not have diabetes previously had a stroke.

Table 83			
Previously Had a Stroke for Selected Health Behaviors and Conditions, 2004			
Health Behavior or Condition	# Respondents	% Had Stroke	95% CI
Fair or Poor Health Status	933	8.7	6.9-10.8
Excellent, Very Good, or Good Health Status	5,045	1.4	1.1-1.8
Physical Health Not Good for 30 Days of the Past 30	383	8.7	6.1-12.2
Physical Health Not Good for 0-29 Days of the Past 30	5,556	1.9	1.6-2.3
Mental Health Not Good for 20-30 Days of the Past 30	338	4.1	2.4-6.9
Mental Health Not Good for 0-19 Days of the Past 30	5,595	2.2	1.9-2.6
Usual Activities Unattainable for 10-30 Days of the Past 30	386	6.6	4.4-9.7
Usual Activities Unattainable for 0-9 Days of the Past 30	5,586	2.0	1.7-2.4
Obese (BMI = 30.0+)	1,515	2.6	1.9-3.6
Overweight (BMI = 25.0-29.9)	2,220	2.5	2.0-3.2
Recommended Weight (BMI = 18.5-24.9)	1,998	2.0	1.5-2.7
No Leisure Time Physical Activity	1,282	5.2	4.0-6.7
Leisure Time Physical Activity	4,707	1.6	1.3-2.0
Current Smoker	1,199	2.7	1.9-3.7
Former Smoker	1,572	3.3	2.5-4.4
Never Smoked	3,211	1.8	1.4-2.3
Drank Alcohol in Past 30 Days	3,219	1.3	0.9-1.7
No Alcohol in Past 30 Days	2,736	3.8	3.2-4.6
Binge Drinker	776	0.9	0.5-1.6
Not a Binge Drinker	5,162	2.6	2.2-3.1
Heavy Drinker	203	1.0	0.3-3.5
Not a Heavy Drinker	5,715	2.4	2.0-2.8
No Mammogram within Past Two Years (40+)	642	4.6	3.2-6.7
Mammogram within Past Two Years (40+)	1,980	3.7	2.9-4.7
No Clinical Breast Exam within Past Two Years	667	3.7	2.5-5.5
Clinical Breast Exam within Past Two Years	2,841	2.2	1.8-2.9
Insufficient Cervical Cancer Screening	395	3.9	2.4-6.5
Sufficient Cervical Cancer Screening	2,203	1.3	0.9-1.8
No PSA Test within Past Two Years (40+)	784	3.7	2.6-5.4
PSA Test within Past Two Years (40+)	955	3.5	2.4-5.0
No Digital Rectal Exam within Past Two Years (40+)	798	3.6	2.5-5.2
Digital Rectal Exam within Past Two Years (40+)	996	3.4	2.4-4.8
No Blood Stool Test within Past Two Years (50+)	2,384	5.0	4.1-6.0
Blood Stool Test within Past Two Years (50+)	876	5.4	4.0-7.3
Never Had Sigmoidoscopy or Colonoscopy (50+)	1,627	4.0	3.0-5.2
Ever Had Sigmoidoscopy or Colonoscopy (50+)	1,660	6.2	5.0-7.6
Haven't Been to the Dentist in the Past 12 Months	1,811	4.0	3.2-5.0
Been to the Dentist in the Past 12 Months	4,169	1.6	1.3-2.0
Not Taking any Precautions Against West Nile Virus	1,908	3.0	2.3-3.9
Taking Precautions Against West Nile Virus	4,056	2.0	1.6-2.5
No Health Insurance (18-64)	366	0.8	0.3-2.1
Health Insurance (18-64)	3,894	1.0	0.8-1.4

Table 83 (continued)			
Previously Had a Stroke for Selected Health Behaviors and Conditions, 2004			
Health Behavior or Condition	# Respondents	% Had Stroke	95% CI
Employer Based Health Insurance Coverage (18-64)	2,670	0.8	0.6-1.3
Private Health Insurance Plan (18-64)	529	0.7	0.3-1.7
Medicare (18-64)	117	5.9	3.0-11.6
Medicaid or Medical Assistance (18-64)	110	3.9	1.8-8.5
The Military, CHAMPUS, TriCare, or the VA (18-64)	185	0.4	0.1-1.7
The Indian Health Service (18-64)	234	0.9	0.3-2.9
No Flu Shot (65+)	411	5.1	3.2-8.1
Flu Shot (65+)	1,262	8.7	7.0-10.7
No Pneumonia Shot (65+)	569	4.9	3.3-7.2
Pneumonia Shot (65+)	1,088	9.3	7.4-11.6
Diabetes	518	6.7	4.7-9.5
No Diabetes	5,470	2.0	1.7-2.4
Current Asthma	438	4.0	2.6-6.0
Former Asthma	184	0.7	0.2-2.6
Never Had Asthma	5,346	2.2	1.9-2.7
Previously Had a Heart Attack	369	16.8	12.9-21.5
Never Had a Heart Attack	5,617	1.6	1.3-2.0
Have Angina or Coronary Heart Disease	401	11.3	8.3-15.1
Do not Have Angina or Coronary Heart Disease	5,569	1.8	1.5-2.1
Physical, Mental, or Emotional Disability	1,240	7.7	6.3-9.5
No Physical, Mental, or Emotional Disability	4,743	1.2	0.9-1.5
Disability with Special Equipment Needed	443	14.2	11.0-18.2
No Disability with Special Equipment Needed	5,546	1.6	1.3-2.0
Four or More Hours of TV Watched per Day	1,422	5.1	4.0-6.4
Less Than Four Hours of TV Watched per Day	4,518	1.6	1.3-2.0
Sick from Poor Indoor Air Quality in Past Year	996	1.7	1.0-2.7
Not Sick from Poor Indoor Air Quality in Past Year	4,950	2.5	2.1-2.9
Sick from Outdoor Air Pollution in Past Year	418	3.0	1.7-5.1
Not Sick from Outdoor Air Pollution in Past Year	5,549	2.3	1.9-2.7
Firearm in Household	3,362	1.7	1.4-2.2
No Firearms in Household	2,515	3.2	2.6-4.0
Loaded and Unlocked Firearm in Household	272	2.0	0.9-4.4
No Loaded and Unlocked Firearms in Household	5,567	2.4	2.0-2.8
No Birth Control (females 18-44 & males 18-59)	327	1.2	0.4-3.2
Birth Control (females 18-44 & males 18-59)	1,660	0.3	0.2-0.7
Never Been Tested for HIV (18-64)	3,070	1.0	0.7-1.4
Been Tested for HIV (18-64)	1,140	0.9	0.5-1.5
Sunburn in Past 12 Months	2,126	0.5	0.3-0.8
No Sunburn in Past 12 Months	3,856	3.7	3.1-4.4
Military Veteran	994	4.6	3.4-6.2
Not a Military Veteran	4,996	1.9	1.5-2.2

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2004

Table 84, on the next page, displays what respondents did to lower their risk of developing heart disease or stroke. The majority of respondents ate fewer high fat or high cholesterol foods, ate more fruit and vegetables, and were more physically active. In 2002 and 2004 the highest percent of respondents were more physically active with 72.9 percent and 77.4 percent respectively.

Table 84 Respondents Did the Following to Lower Their Risk of Developing Heart Disease or Stroke, 2002 and 2004				
	2004		2002	
	# Respondents	Percent	# Respondents	Percent
More physically active	5,984	77.4	4,678	72.9
Eating more fruits and vegetables	5,986	76.9	4,669	72.7
Eating fewer high fat or high cholesterol food	5,895	62.1	4,608	63.2

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2002 and 2004

The majority of respondents were not told by a doctor, nurse, or other health professional within the past 12 months to eat fewer high fat or high cholesterol foods, eat more fruits and vegetables, or be more physically active. Table 85, below illustrates this.

Table 85 Respondents Who Were Told by a Doctor, Nurse, or Other Health Professional Within the Past 12 Months to do the Following, 2002 and 2004				
	2004		2002	
	# Respondents	Percent	# Respondents	Percent
Be more physically active	5,992	29.1	4,692	26.1
Eat more fruits and vegetables	5,990	27.1	4,694	24.2
Eat fewer high fat or high cholesterol food	5,996	23.4	4,689	19.0

Source: The Behavioral Risk Factor Surveillance System, South Dakota Department of Health, 2002 and 2004